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ABSTRACT

A study compared the levels of academic achievement of high school equivalency students and high school diploma students as measured by grade point averages and proportion of credit hours passed. The problem was whether students with a high school equivalency certificate could be as academically successful in a university program as high school graduates. Data collected were grade point averages, credit hours attempted, and credit hours passed of 26 high school equivalency and 27 high school diploma students attending Brandon University, Manitoba, Canada, on a first-year basis in 1982-83. Results supported the findings of others pertaining to high school equivalency students achieving the same level of academic success as high school diploma students. No significant difference was found between the distribution of grade point average scores or average ratios of credit hours passed to credit hours attempted of the two groups of students. (A listing of references is appended.) (YLB)

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AMERICAN COUNCIL ON EDUCATION ged RESEARCH BRIEF

GED TESTING SERVICE OF THE AMERICAN COUNCIL ON EDUCATION • DECEMBER 1983 • NO. 5

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High School Equivalency and High School Diploma Students At Brandon University: A Comparison of Academic Success*

Sherril Colert

Preamble. The Tests of General Educational Development, initiated in the early 1940s by the United States Armed Forces Institute, were made available for civilian testing in the 1950s. Since then, the tests have been increasing in popularity among the approximately twenty percent of high school students who drop out before graduating, and in 1982 nearly 800,000 people wrote the tests (GED Testing Service, 1982:5). For many equivalency certificate holders, the tests are not seen as an end in themselves but as leading to further self-development. Many apply to postsecondary institutions and more and more institutions are accepting high school equivalency. All of the American states now recognize the GED Tests as equivalent to high school, and in a recent study conducted by the Office on Educational Credit and Credentials of the American Council on Education (1982), about ninety-five percent of 2,236 postsecondary institutions who replied to a questionnaire stated that they admit applicants who "have earned a high school equivalency (GED) credential or have met specific minimum scores on the GED Tests." In Canada, acceptance of the high school equivalency certificate, especially among universities, has proceeded at a slower rate in spite of the fact that all territories and provinces in Canada, except for Ontario and Quebec, recognize the GED Tests.

Purpose. Do Grade XII high school equivalency students attending a small Canadian undergraduate university achieve the same degree of academic success as high school diploma students? To answer this question, a study was undertaken at Brandon University in Brandon, Manitoba, Canada, comparing the levels of academic success of high school equivalency students and high school diploma students as measured by grade point averages and proportion of credit hours passed.

High school equivalency students admitted to Brandon University are assigned regular student status. They are neither restricted to a limited number of courses, nor required to participate in skill assessment and academic support from either the university's Learning Assistance Center or the Mature Student Center. In essence, the high school equivalency students attending Brandon University are regarded as identical to high school diploma students who have obtained Grade XII standing by completing a regular high school program.

The nature of the problem addressed in this study was whether or not students possessing a high school equivalency certificate could be as academically successful in a university program as students possessing a high school diploma. The research hypotheses were the following:

1. There is no statistically significant difference in the distribution of the grade point average scores of high school equivalency and high school diploma students attending Brandon University.

2. There is no statistically significant difference in the average of the ratio of credit hours passed to credit hours attempted by high school equivalency and high school diploma students attending Brandon University.

Studies which have been undertaken to investigate the success of high school equivalency students have dealt mainly with community colleges (C. V. Ayers, 1978 and 1980; Byrd, et. al., 1973), vocational institutions (Wilson, Davis & Davis, 1981), two-year colleges (Wolf, 1982), military institutions (Waller, 1976), and American students, but not with universities or Canadian students. Although most of the studies have shown that equivalency students can succeed in postsecondary education as well as diploma students, more research is needed, especially in Canadian institutions and at the University level.

One Canadian study, conducted by the University of Victoria in British Columbia examined the effectiveness of the GED Test in selecting non-high-school graduates from a university program operating in two federal prisons in Canada. The study showed that high school equivalency students with lower GED Test scores than were normally

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accepted at the University of Victoria could achieve academic success when extra assistance was provided in English composition and study skills (J. D. Ayers, 1980).

Method. The data collected were (1) grade point averages,[1] (2) credit hours[2] attempted, and (3) credit hours passed of twenty-six high school equivalency and twenty-seven high school diploma students attending Brandon University on a first-year basis in 1982-83. Twenty-seven high school equivalency students were identified by a manual search of the 1982 admission files. When the grades were obtained in May, it was discovered that one of the twenty-seven equivalency students had withdrawn before attempting any examination. The twenty-six remaining students constituted the high school eqivalency sample. From a computer list of all students admitted to Bradon University in 1982 on the basis of completing an approved high school program, a systematic random sampling of twenty-seven student numbers was conducted to comprise the high school diploma group.

Once the 1982-83 final grades were awarded in May, 1983, the grade point averages, the number of credit hours attempted, and the number of credit hours passed, were obtained for all fifty-three students from the computerized student record files. First, the grade point averages were tabulated and the frequency distributions determined for each group. Mean and median grade point averages for each group were calculated. Then the number of credit hours attempted and the number of credit hours passed were tabulated, and the ratio of credit hours passed to credit hours attempted by each student was calculated. Finally, the averages of the credit hour ratios and the standard deviations for each group were determined.

Both null hypotheses were tested at the .05 level of significance. The Kolmogorov-Smirnov, a powerful goodness-of-fit test (Marascuilo & McSweeney, 1977:250), was used to determine whether the grade point average scores obtained by the equivalency students and those obtained by the high school diploma students could reasonably be thought to have come from the same population of first-year students. The second null hypothesis was tested using a two tailed t-test for indepdendent samples.

Results. The frequency distribution of the grade point averages and the data resulting from the analysis of the Kolmogorov-Smirnov test are shown in Table 1. The diploma students clustered in the 1.01-2.00 interval (i.e., "D" and "C" letter grades) whereas the equivalency students clustered in the 2.00-3.00 interval (i.e., "C" and "B" letter grades). The Kolmogorov-Smirnov test produced a calculated maximum deviation value of D= .20. As this number was less than the critical value of .37, the null hypothesis was not rejected. That is, although the mean grade point averages for the diploma students was higher than the mean for the equivalency students, there was no statistically significant difference in the distribution of the grade point averages between both groups of students. The scores in the equivalency group and the diploma group can reasonably be thought to have come from the same population.

TABLE 1

Frequency Distribution of Grade Point Averages and Kolmogorov-Smirnov Calculations

	Grade Point Average Intervals				
	0.00	1.01-1.00	1.01-2.00	2.01-3.00	3.01-4.00
Frequency of Diploma Students N=27	2	3	11	4	7
Frequency of Equivalency Students N=26	5	5	3	10	3
$P27(X)_1$	2/27	5/27	16/27	20/27	27/27
$P26(X)_2$	5/26	10/26	13/26	23/26	26/26
$P27(X)_1$-$P26(X)_2$	-83/702	-140/702*	65/702	-101/702	0

*Max. Deviation= 1994

Group	Mean	Median
Diploma	1.98	1.56
Equivalency	1.68	2.03

The data resulting from the analysis of the mean credit hour ratios are shown in table 2. The t-test, used to test the second null hypothesis, yielded a calculated t value of 1.90. Although the mean for the ratio of credit hours passed to credit hours attempted at Brandon University was higher for the diploma students, the difference between diploma students and equivalency students was not statistically significant.

TABLE 2

Data Resulting from the Study of the Credit Hours Attempted and Passed

Range of ratios	0.00-1.00
Average of ratios of credit hours passed to credit hours attempted:	
High School Equivalency	60
High School Diploma	79
Standard deviation:	
High School Equivalency	40
High School Diploma	28
Critical t value	1.96
Calculated t value	1.90
Level of significance	05

Conclusions. The results of this study supported the findings of others (C. V. Ayers, 1978 and 1980; Sharon, 1972; Swarm, 1981; Wilson, Davis, & Davis, 1981; Wolf, 1982) pertaining to high school equivalency students achieving the same level of academic success as high school diploma students. No significant difference was found be-

[1] Grade point average is determined by awarding the following points for each credit hour earned: 4.0 for an A, A+, A-; 3.5 for a B+; 3.0 for a B or B-; 2.5 for a C+; 2.0 for a C; 1.0 for a D; and 0.0 for an F. After the total points are summed, they are divided by the total number of credit hours. The resulting number is the grade point average.

[2] Courses are assigned either three credit hours for a one-term course or six credit hours for a two-term course. No credits are awarded for completing half of a six credit hour course.

tween the distribution of grade point average scores or average ratios of credit hours passed to credit hours attempted of the two groups of students. The conclusion is that high school equivalency students can achieve the same level of academic success as high school diploma students enrolled in a first-year baccalaureate program at a small Canadian university.

This study was limited by the small numbers of students attending Brandon University on the basis of high school equivalency. As the study was conducted in only one institution, the number of students who could be included was restricted, resulting in the inability to generalize the findings beyond Brandon University. Further studies could consider those moderator variables such as age, sex, full-time/part-time status, and degree program, which were not controlled in this study.

Recommendations, based on results of the study are that:

1. High school equivalency certificate holders be appraised of the results of this study and encouraged to apply to university programs with confidence in their ability to succeed at the same level as diploma holders.

2. Further studies of high school equivalency students be undertaken by Brandon University and by other universities, to determine the extent to which the results of this study can be generalized.

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